

**FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION**

Please fill in the highlighted areas

*all sections (IA, IB, IC, etc.) must be addressed or the application will be considered invalid*

**I. APPLICANT INFORMATION**

- A. Applicant Name: Big Hole Watershed Committee
- B. Mailing Address: P.O. Box 21
- C. City: Divide State: MT Zip: 59727
- Telephone: 406-960-4855 E-mail: [info@bhwc.org](mailto:info@bhwc.org)
- D. Contact Person: Pedro Marques, Restoration Programs Manager
- Address if different from Applicant:
- City:  State:  Zip:
- Telephone: 406-552-2369 E-mail: [pmarques@bhwc.org](mailto:pmarques@bhwc.org)
- E. Landowner and/or Lessee Name (if other than Applicant): Montana Fish, Wildlife and Parks – Mount Haggin WMA  
Attn: Vanna Boccadori, WMA Manager
- Mailing Address: 1820 Meadowlark Lane
- City: Butte State: MT Zip: 59701
- Telephone: 406-494-1953 E-mail: [vboccadori@fwp.gov](mailto:vboccadori@fwp.gov)

**II. PROJECT INFORMATION\***

- A. Project Name: French Creek Sediment Load Reduction
- River, stream, or lake: French Creek
- Location: Township: 2N Range: 12W Section: 1
- Latitude: 45.94653 Longitude: -113.07099 *within project (decimal degrees)*
- County: Deer Lodge
- B. Purpose of Project:
- To provide a long-term sediment reduction solution for French Creek.

C. Brief Project Description:

Goals & Objectives:

- Reduce fine sediment loads in French Creek and Big Hole River.
- Restore French Creek where impacted by past mining & logging operations.
- Improve native fish and aquatics habitat.
- Reconnect floodplain & wetlands to surface water in lower French Creek.
- Restore public lands.
- Increase overbank deposition and groundwater recharge for late season base-flow.

The French Creek drainage, located on the Mount Haggin Wildlife Management Area (WMA), was heavily placer mined for gold and logged for nearly a century, beginning in the 1860s. Its soils and waters were also contaminated by fallout emissions from nearby smelters. The French Creek drainage has been a priority area for watershed restoration to the Big Hole Watershed Committee (BHWC) as well as several State & Federal agencies and NGOs for the last five years due to the extensive damages caused to steep slope vegetation, stream form and function, and riparian health. Several projects have already been completed or are currently in progress in this area, and the entire French Creek drainage is slated for native fish restoration by Montana Fish, Wildlife and Parks. The proposed French Creek Sediment Reduction project will contribute substantial habitat improvements to the overall goals of native fish restoration in this watershed.

The proposed project will address mining-related damages to French Creek, which has been pinned against a high eroding bank by an unnatural dike feature, causing annual deposition of an estimated 800+ tons of sediment per year, affecting downstream fish and mussel habitat (see images in attachments where linear sagebrush vegetation marks dike location). Our restoration approach for this project is to replicate reference conditions in this reach by constructing an unconfined stream channel east of the channel's current location, connecting the unconfined reaches above and below the project area. Approximately 2700' of lineal feet of new stream channel will be constructed in the floodplain away from the hillslope. The new stream channel will be located in an area of healthy riparian vegetation. Native sods and existing willows and willow transplants will be used to construct the banks of the new stream channel. Bioengineered meander bends will also be used where native vegetation may be lacking to both temporarily ensure stability until vegetation is re-established and to create complex cover habitats. The existing floodplain and wetland vegetation in the restoration area will be incorporated into the design to provide cost effective and robust vegetation restoration.

The project currently has secured funding from Montana DEQ that cover all coordination, monitoring, education/outreach, design, permitting, bidding and oversight costs, as well as some construction costs and mobilization (\$240,000). These funds will only come available in July, 2018 so detailed survey and geomorphic assessment have yet to be completed. Project costs are based on preliminary design and cost estimates from engineer and are considered conservative. **BHWC and FWP are prepared to adjust project design details and construction costs with engineer to match available funding.** Project savings could be found by decreasing the amount of bioengineering on banks and relying more on willows and sods. Funding from the Future Fisheries program would be used for all remaining construction costs, including channel construction, native vegetation transplant, bank stability work, etc. More details provided in the budget attachment. Potential other sources of funding- George Grant Trout Unlimited (\$5,000) and The Nature Conservancy (\$47,000) have been requested but are unsecured.

Once Arctic grayling and Westslope Cutthroat trout are restored, French Creek will represent the second largest interconnected stream system (over 40 miles of stream) in the upper Missouri River drainage with a native fish community. This project may also contribute to the restoration of Western Pearlshell mussels to French Creek once water quality and aquatic and riparian habitat have improved.

D. Length of stream or size of lake that will be treated: 2,700 ft

E. Project Budget:

**Grant Request (Dollars): \$ 273,476.00**

Contribution by Applicant (Dollars): \$ In-kind \$ 5000  
(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ 216,000 In-kind \$  
(attach verification - See page 2 budget template)

**Total Project Cost: \$ 494,476.00**

F. Attach itemized (line item) budget – see template

Attach **specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other**  
G. **information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete a *supplemental questionnaire***  
(fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. **Attach land management & maintenance plans that will ensure protection of the reclaimed area.**

### III. PROJECT BENEFITS\*

A. What species of fish will benefit from this project?:

Westslope cutthroat trout and Arctic grayling

B. How will the project protect or enhance wild fish habitat?:

The project will enhance fish habitat on 2,700 feet of channel by significantly reducing a major sediment source to the channel. Spawning substrate within and far downstream of the project reach will benefit from the relocation of the channel away from the high terrace. Channel design and bioengineered streambanks will create more diverse habitat in the channel with the use of root wads and mature transplants and construction of pools and riffles.

C. Will the project improve fish populations and/or fishing? To what extent?:

The project will improve water quality and fish habitat by reducing stream sedimentation. Project will improve quality and quantity of spawning habitat and habitat diversity conditions beyond the 2700 feet of channel of active construction. These improvements should increase fish populations. Reduced water temperature from active floodplain function and increased late season flows will benefit fish in both the French Creek drainage and the Big Hole River.

This project is part of a suite of projects on public land in the Mt. Haggin Wildlife Management Area. With the implementation of the fish barrier downstream and introduction of native fish species to 40 miles of headwater tributaries upstream, the fishery in this region could become one-of-a-kind. The fishing locally and in the Big Hole River downstream would benefit from a stronghold of pure native cutthroat and grayling in the French Creek watershed. There are also potential benefits for pearlshell mussel.

- D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

Yes, the project is located entirely on public land. The public will have the opportunity to fish for native species (Arctic grayling and Westslope cutthroat trout) in a system without nonnative fish upon completion of the barrier project. The improved habitat conditions and decreased sedimentation of French Creek will improve availability of spawning substrate and suitable habitat diversity for the native species.

- E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

Montana Fish, Wildlife and Parks manages this land and has dedicated personnel to the WMA for the foreseeable future. The Big Hole Watershed Committee is committed to supporting MFWP as necessary and provided funding.

- F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

This area was the location of the first gold strike in the Big Hole watershed in the 1860s, resulting in extensive placer mining as well as logging to feed the nearby Washoe smelter. Linear gravel features, clearly the result of this mining history, run through French Creek's floodplain, confining the channel against a high eroding bank (terrace). These gravel piles act as a dike, limiting proper stream function and forcing the channel into an erosive bank. Preliminary estimates (BEHI method) show over 800 tons/year of sediment contributed to French Creek.

This project will eliminate this large sediment source by constructing 2700 feet of new channel with only natural amounts of annual streambank erosion and improve water quality by reducing sediment loading. Natural channel function and riparian vegetation will be restored along 2,700 feet of channel, with benefits for native fish and other species of concern. Abandoned channel will be restored to a depressional feature.

- G. What public benefits will be realized from this project?:
-

The intact system will provide benefits to fish & wildlife, recreation, and the floodplain, as well as to the water supply of Butte, which sources 40% of its water from the Big Hole River (French Creek<Deep Creek<Big Hole River).

*Fish & Wildlife:* Westslope cutthroat trout and Arctic grayling are slated to be restored to the French Creek drainage. Both Species are species of Concern in Montana and have been petitioned for listing under the Endangered Species Act. Large scale restoration projects such as the French Creek watershed project will aid in conserving these species and lessen the chances that they will warrant listing as a Threatened or Endangered Species. Preventing the listing of these species will benefit all Montanans, particularly private landowners in the Big Hole.

Woody debris rootwads, channel bed shaping and mature transplants and sod mats will immediately improve fish and wildlife habitat in the project reach. After several seasons of overbank stream events in the new channel, floodplain and riparian habitat will be substantially improved. Wildlife habitat will also improve as a result of the restoration of the riparian area, with benefits multiple game species such as moose, elk, deer, and bear as well as non-game species such as Sandhill crane, beaver.

*Recreation:* Opportunities for Montanans to observe, and in some cases harvest, wildlife species will be increased through the restoration of French Creek. Upon completion, this project will provide anglers the unique opportunity to fish for native species in a healthy, functioning stream system that excludes nonnative fish species.

*Floodplain:* This project will benefit French Creek's floodplain by creating 2700' of new channel with a hydrologically active floodplain. Almost 20 acres of floodplain is not currently mapped as riparian. These acres will become active parts of the floodplain post construction and likely convert to wetland.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No, the project is located entirely on public property (FWP Mount Haggin Wildlife Management Area).

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No.

J. Is this project associated with the reclamation of past mining activity?:

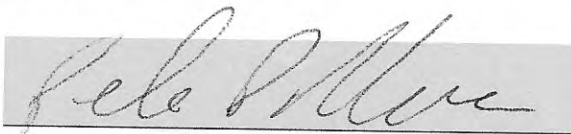
The dike and earthwork that created the impairment was likely related to mining activity in the watershed beginning in 1863. While the actual impairment is sediment from the high terrace, the location of the channel and restriction of the floodplain is related to mining activity.

Each approved project applicant must enter into a written agreement with Montana Fish, Wildlife & Parks specifying terms and duration of the project. The applicant must obtain all applicable permits prior to project construction. A competitive bid process must be followed when using State funds.

#### IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature:



Date:

05/30/2018

Sponsor (if applicable):



**\*Highlighted boxes will automatically expand.**

**Mail To:** Montana Fish, Wildlife & Parks  
Fisheries Division  
PO Box 200701  
Helena, MT 59620-0701

**E-mail To:** Michelle McGree  
[mmcgree@mt.gov](mailto:mmcgree@mt.gov)  
(electronic submissions **MUST** be signed)

Incomplete or late applications will be rejected and returned to applicant.  
Applications may be rejected if this form is modified.

**\*\*\*Applications must be signed and *received* by the Future Fisheries Program Officer in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.\*\*\***

# BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables must be completed or the application will be returned

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES**	IN-KIND CASH	TOTAL
<b>Personnel***</b>								
Survey	1	LS	\$12,000.00	\$ 12,000.00			12,000.00	\$ 12,000.00
Design	1	LS	\$25,000.00	\$ 25,000.00			25,000.00	\$ 25,000.00
Permitting	1	LS	\$10,000.00	\$ 10,000.00		5,000.00	5,000.00	\$ 10,000.00
Project Bidding	1	LS	\$6,000.00	\$ 6,000.00			6,000.00	\$ 6,000.00
Oversight	1	LS	\$30,000.00	\$ 30,000.00			30,000.00	\$ 30,000.00
BHWC Admin	1	LS	\$24,000.00	\$ 24,000.00			24,000.00	\$ 24,000.00
BHWC Outreach, Education and Monitoring	1	LS	\$10,000.00	\$ 10,000.00			10,000.00	\$ 10,000.00
			Sub-Total	\$ 117,000.00	\$ -	\$ 5,000.00	\$ 112,000.00	\$ 117,000.00
<b>Travel</b>								
Mileage				\$ -				\$ -
Per diem				\$ -				\$ -
			Sub-Total	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Construction Materials****</b>								
Taxes, Bonds, & General Requirements	1	LS	\$23,000.00	\$ 23,000.00			23,000.00	\$ 23,000.00
	1	LS	\$20,000.00	\$ 20,000.00			20,000.00	\$ 20,000.00
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
			Sub-Total	\$ 43,000.00	\$ -	\$ -	\$ 43,000.00	\$ 43,000.00
<b>Equipment and Labor</b>								
Water & Erosion Control	1	LS	\$12,000.00	\$ 12,000.00			12,000.00	\$ 12,000.00
Clearing and Grading	1.5	AC	\$25,000.00	\$ 37,500.00	37,500.00		-	\$ 37,500.00
Earthwork - Flowage	1,000	CY	\$6.00	\$ 6,000.00			6,000.00	\$ 6,000.00
Stream Channel Construction	2,570	LF	\$25.00	\$ 64,250.00	64,250.00			\$ 64,250.00
Bioengineered Structures	1,285	LF	\$20.00	\$ 25,700.00	25,700.00			\$ 25,700.00
Point Bar Stream Bank Stabilization	1,285	LF	\$10.00	\$ 12,850.00	12,850.00			\$ 12,850.00
Native Stream Bank Stabilization	2,570	LF	\$8.00	\$ 20,560.00	20,560.00			\$ 20,560.00
Woody Debris Removal	51	EA	\$150.00	\$ 7,650.00	7,650.00			\$ 7,650.00
Abandoned Channel Stabilization	3	EA	\$1,500.00	\$ 4,500.00	4,500.00			\$ 4,500.00

### BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Abandoned Channel	2,000	LF	\$15.00	\$ 30,000.00	30,000.00			\$ 30,000.00
Collect Willow P	1	LS	\$15,000.00	\$ 15,000.00	15,000.00			\$ 15,000.00
Install Willow Po	1,000	LF	\$3.00	\$ 3,000.00			3,000.00	\$ 3,000.00
Topsoil/ Organic	1.5	AC	\$3,000.00	\$ 4,500.00	4,500.00			\$ 4,500.00
Seed Wetland a	1.5	AC	\$1,500.00	\$ 2,250.00	2,250.00			\$ 2,250.00
Sod Salvage	1	LS	\$12,000.00	\$ 12,000.00	12,000.00			\$ 12,000.00
Mature Willow T	1	LS	\$10,000.00	\$ 10,000.00			10,000.00	\$ 10,000.00
Large Rock Sal	3	EA	\$800.00	\$ 2,400.00	2,400.00			\$ 2,400.00
Contingency (10%	10%	Construction Total	\$ 343,160.00	\$ 34,316.00	34,316.00			\$ 34,316.00
		Sub-Total		\$ 304,476.00	\$ 273,476.00	\$ -	\$ 31,000.00	\$ 304,476.00
<b>Mobilization</b>								
Mobilization/De	1	LS	\$30,000.00	\$ 30,000.00			30,000.00	\$ 30,000.00
mobilization				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
		Sub-Total		\$ 30,000.00	\$ -	\$ -	\$ 30,000.00	\$ 30,000.00
<b>TOTALS</b>				\$ 494,476.00	\$ 273,476.00	\$ 5,000.00	\$ 216,000.00	\$ 494,476.00

#### OTHER REQUIREMENTS:

**All of the columns in the budget table and the matching contribution table MUST be completed appropriately or the application will be invalid.** Please see the example budget sheet for additional clarification.

\*Units = feet, hours, inches, etc. Do not use lump sum unless there is no other way to describe the costs.

\*\*Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used for calculations). Describe here or in text.

Reminder: Government salaries cannot be used as in-kind match

\*\*\*The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications must include a minimum of two competitive bids for the cost of undertaking the project.

\*\*\*\*The Review Panel recommends a maximum fencing cost of \$1.50 per foot. Additional costs may be the responsibility of the applicant and/or partners.

### MATCHING CONTRIBUTIONS (do not include requested funds)

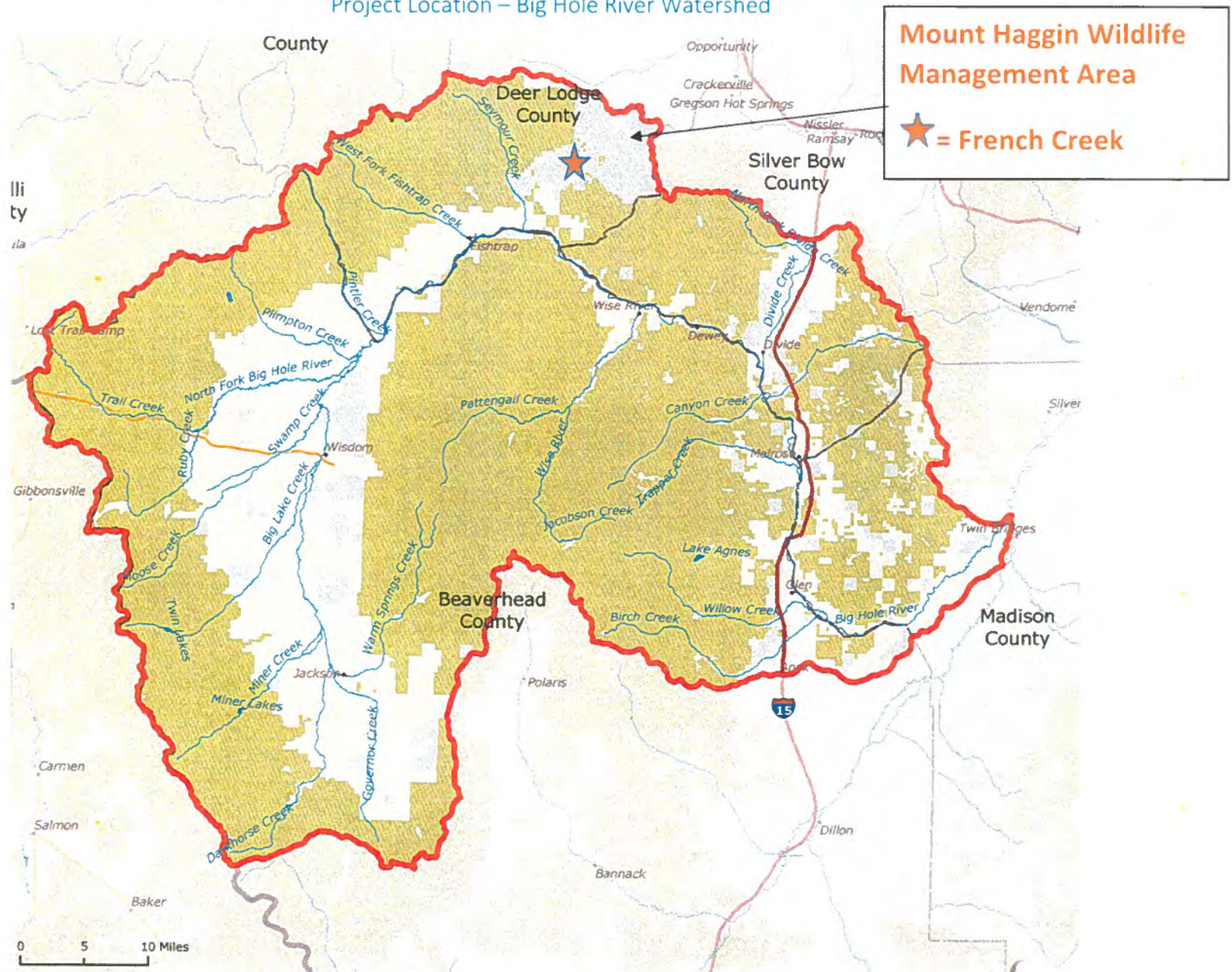
CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Secured? (Y/N)
Montana DEQ	\$ -	\$ 206,000.00	\$ 206,000.00	Yes
Montana Trout Unlimited	\$ -	\$ 5,000.00	\$ 5,000.00	No
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	

**BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS**

	\$	-	\$	-	\$	-	
	\$	-	\$	-	\$	-	
	\$	-	\$	-	\$	-	
	\$	-	\$	-	\$	-	
<b>TOTALS</b>	\$	-	\$	211,000.00	\$	211,000.00	

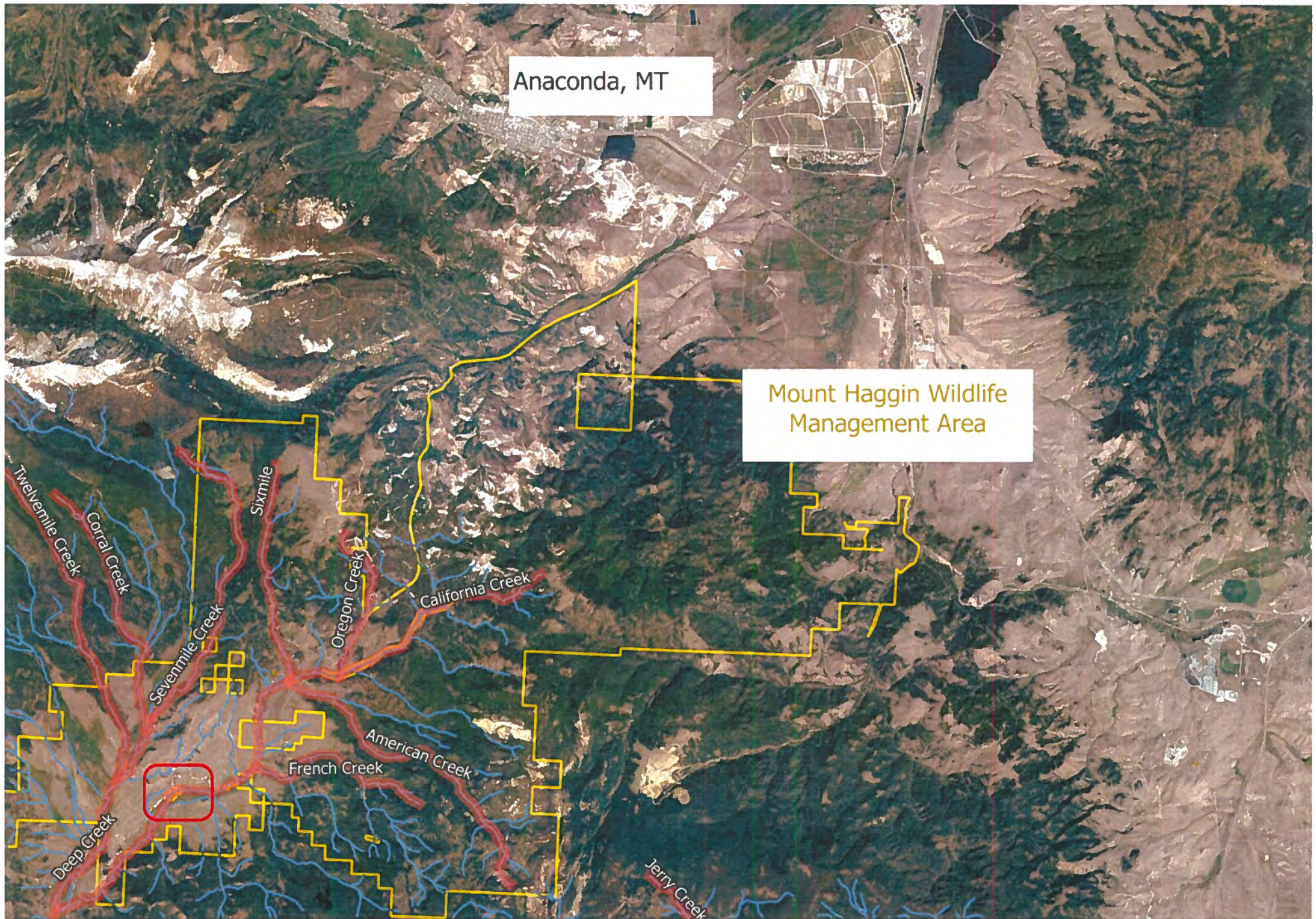
## 2018 Big Hole Watershed Committee FF Application – French Creek

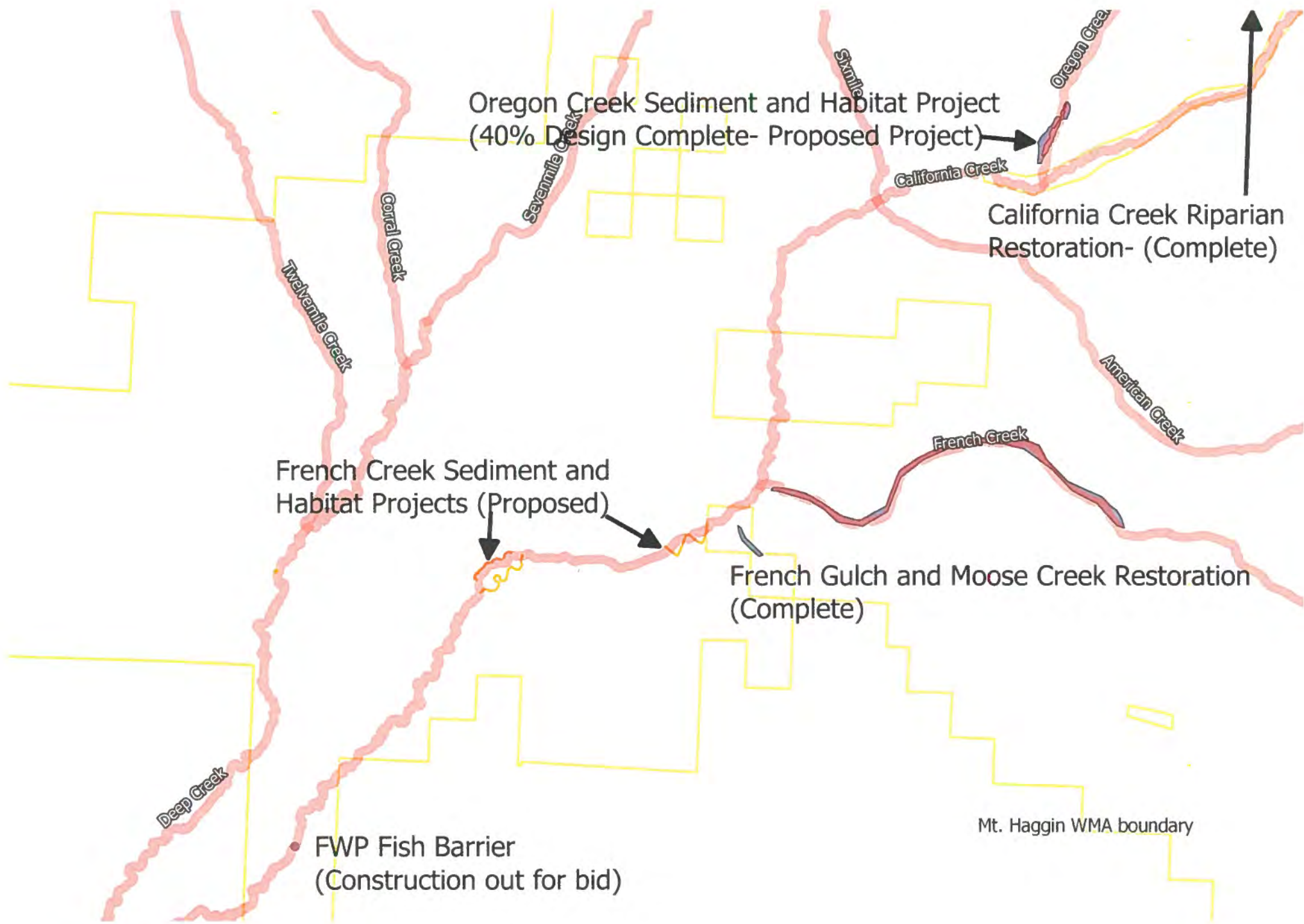
Project Location – Big Hole River Watershed

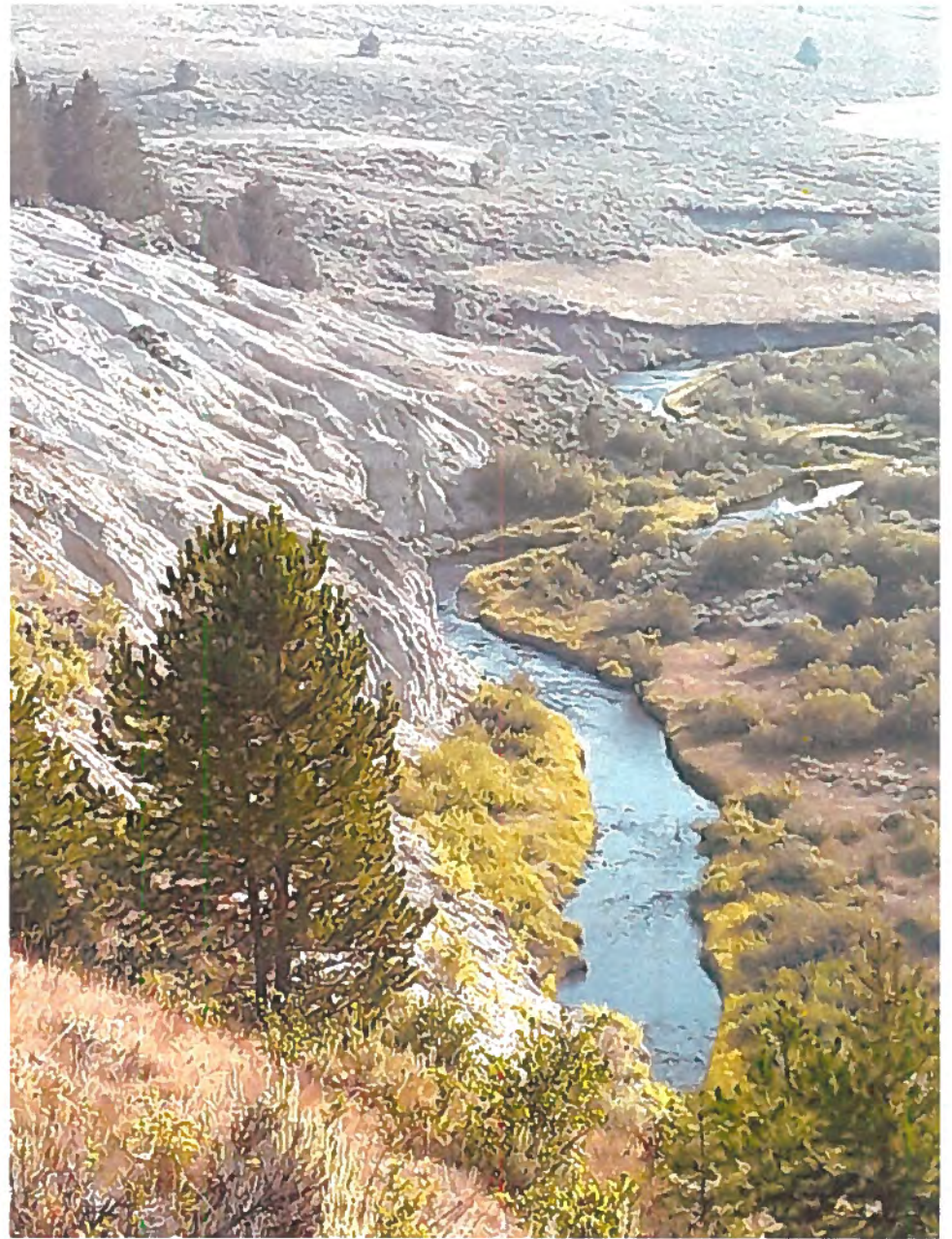


Anaconda, MT

Mount Haggin Wildlife  
Management Area



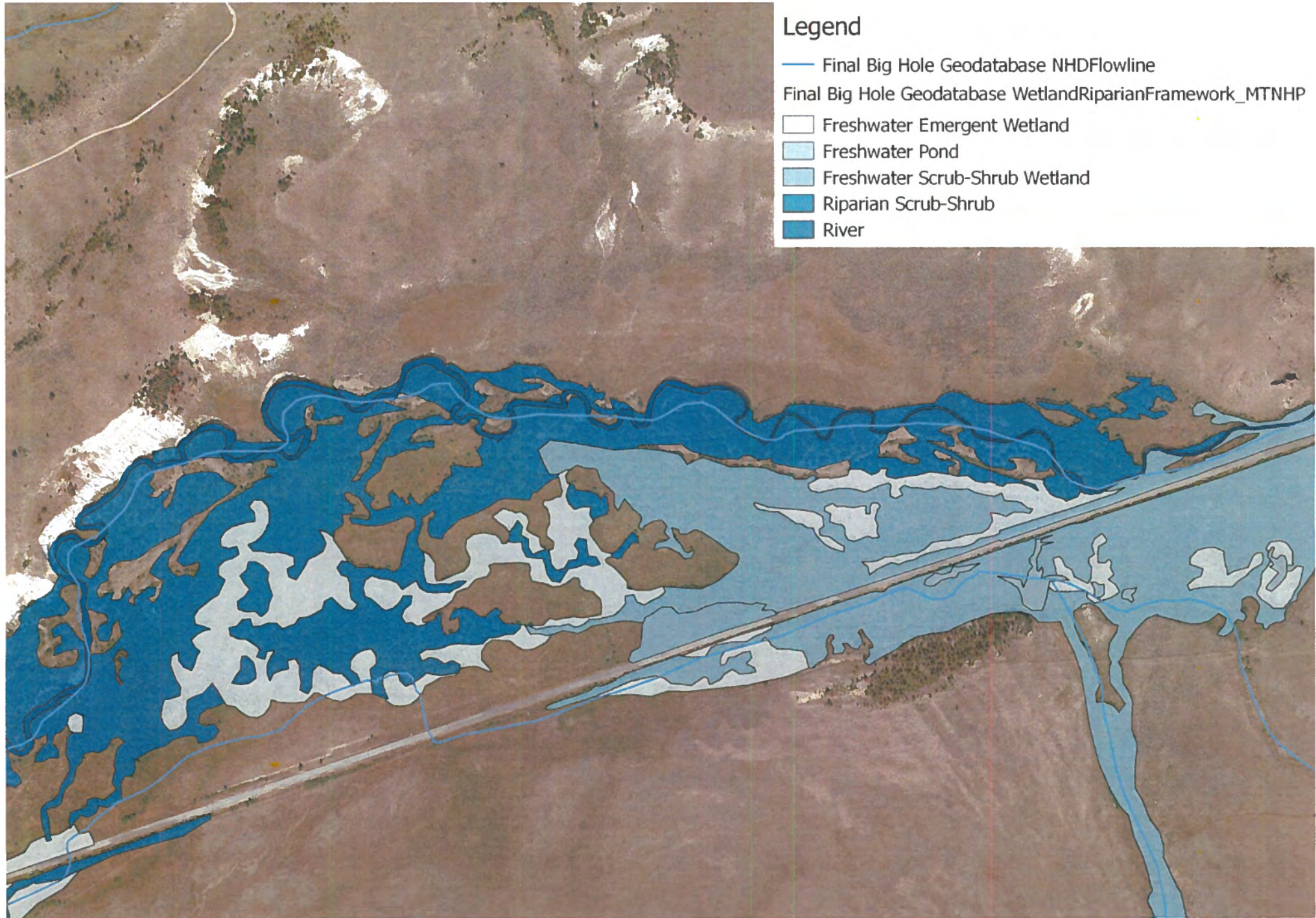












NOTES:

- 1. CONCEPTUAL DESIGN PROVIDES LAYOUT TO REPLICATE REFERENCE CONDITIONS OBSERVED IN REACH UPSTREAM OF IMPACTED REACH.
- 2. SINUOSITY = 1.63
- 3. MEAN SLOPE = 0.7%
- 4. MEANDER BELT WIDTH = 255 FT
- 5. MEAN RADIUS OF CURVATURE = 81 FT
- 6. MEANDER WAVELENGTH = 300 FT

HIGH TO EXTREME SEDIMENT SOURCE  
HILLSLOPES AGAINST STREAMBANK

IMPACTED AREA OF  
UPLANDS LACKING  
RIPARIAN VEGETATION

TIE-IN TO EXISTING CHANNEL  
(MATCH WIDTH AND GRADE)

RESTORE EXISTING CHANNEL WITH EXCESS MATERIAL AND SOD MATS

TIE-IN TO EXISTING CHANNEL  
(MATCH WIDTH AND GRADE)

FRENCH CREEK

NEW FRENCH CREEK CHANNEL

ABANDONED HWY 567



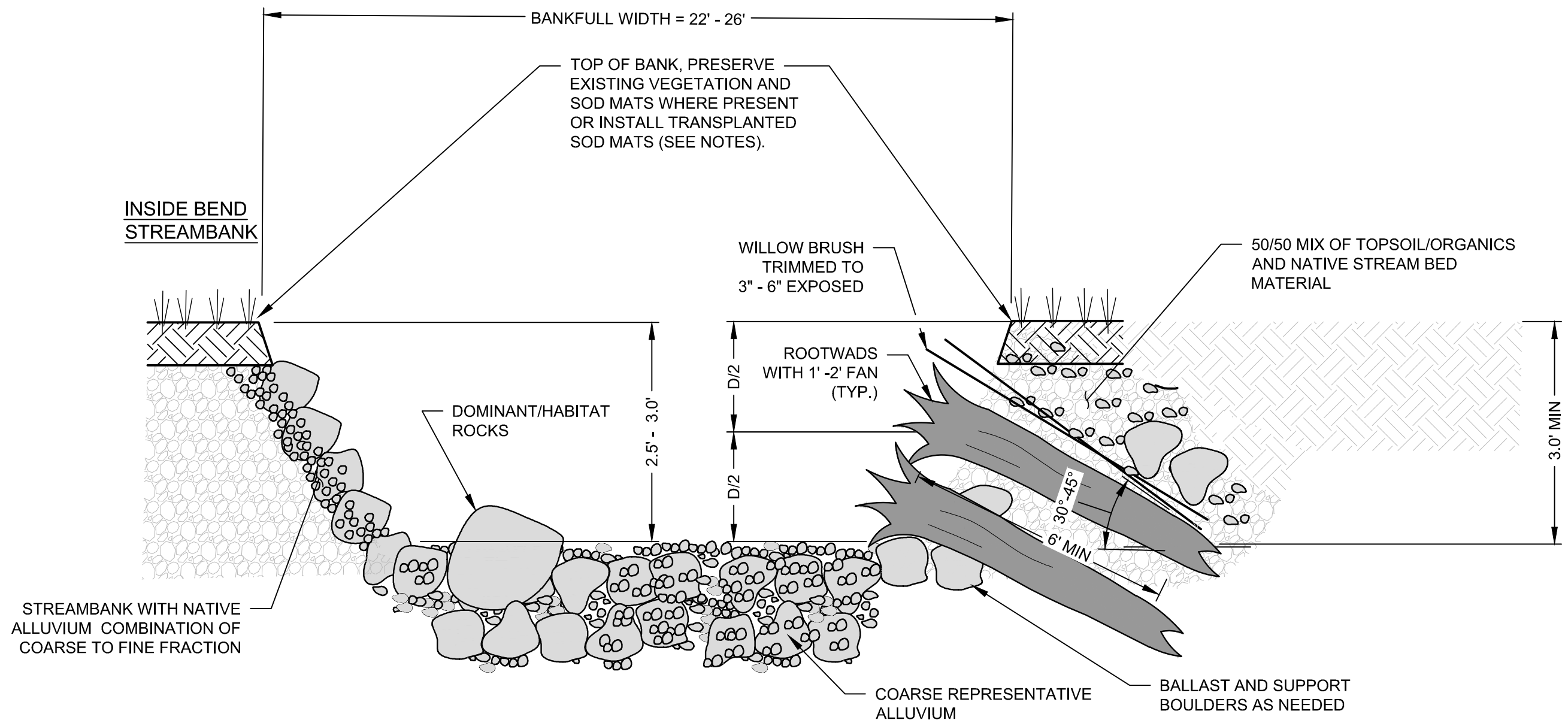
1 Engineering Place  
Helena, MT 59602  
406.442.3050  
www.m-m.net

DRAWN BY: MDB  
DSGN. BY: MDB  
APPR. BY: MDB  
DATE: 09/2017

FRENCH CREEK RESTORATION AND SEDIMENT SOURCE REDUCTION	
DEER LODGE CNTY	MT
FRENCH CREEK CONCEPTUAL PLAN	

PROJECT NO.  
5406.P001

FIGURE NUMBER  
FIG. 1



SECTION VIEW

NOTES:

1. SEE POOL/RIFFLE SEQUENCE DETAILS FOR NATIVE STREAMBED MATERIAL GRADATION.
2. LAY WILLOW BRUSH PERPENDICULAR TO THE BANK AT A RATE OF 5/LF. BRUSH ENDS OF THEN STEMS SHOULD EXTEND INTO THE LOW FLOW WATER LEVEL.
3. PLACE THE ENTIRE LENGTH AND BOTTOM END OF THE STEM ONTO A MIX OF SILT/LOAM/CLAYS/FINES (NO COBBLES) TO ENHANCE ROOT GROWTH.
4. CAP THE SOIL LIFT WITH SILT/LOAM OR WETLAND SOD MATS; SEED SOIL OR ANCHOR SOD MATS INTO PLACE.
5. SALVAGE ROOTWADS FOR BIOENGINEERING THAT ARE COMPETENT AND WITHOUT ROTTEN STEMS.



# **Montana Fish, Wildlife & Parks**

1820 Meadowlark Lane, Butte, MT 59701

May 30, 2018

FFIP Review panel

Dear Pannel,

I am writing this letter in support of the Big Hole Watershed Committee's application for funding to restore reaches of French Creek that are suffering from significant streambank erosion. Significant channel alteration occurred in this reach of stream in the early 1900's (prior to 1940) where the stream appears to have been channelized and directed toward a work area. Historical records are unclear on the type of work that went on at this area. The stream has abandoned this straightened channel is attempting to reestablish itself. This his causing massive bank erosion and sedimentation (see photo below). Further the stream flows along the base of large chalky bluffs and is constantly eroding the toe of these slopes causing material fall into the stream. The stream channel downstream of this reach is choked with fine sediments from this high erosion area.



The potential solution for reducing long-term erosion of the site is to relocate the stream channel to a section of the floodplain with a flourishing riparian area. This area has abundant willows and sedges and would be an excellent area to for channel establishment. The potential benefits of the project will be significant reduction in sediment entering French Creek. Also, there would likely be improvements in aquatic habitat because the large sediment loads are

filling pools and clogging gravels. Reduced sediment would benefit spawning fish, aquatic invertebrates and pearlshell mussels.

The French Creek drainage has been a priority area for watershed restoration in the Big Hole River drainage. Work is currently underway in the headwaters (California Creek) to improve water quality affected by atmospheric deposition from the Anaconda Smelter. French Gulch which was heavily impacted by placer mining was also restored in 2016. French Creek is also slated for native fish restoration including Arctic grayling and westslope cutthroat trout. Native salmonids are not as tolerant to habitat alterations and fine sediment loading as non-native brook trout. Once restored to a native fish population, French Creek will represent the second largest interconnected stream system (over 40 miles of stream) in the upper Missouri River drainage with a native fish community. The project will also result in advancing the goal of restoring westslope cutthroat trout to 400 miles of stream in the Big Hole Drainage (Statewide Fisheries Management Plan 2011). French Creek is also home to a native population of pearlshell mussels. Pearlshell mussels have been documented downstream of the project area, but their numbers are few. It is likely that the altered habitat conditions and fine sediment inputs from upstream reaches limits mussel populations in the area. It may be possible to restore pearlshell mussels to French Creek once water quality and aquatic and riparian habitat is improved.

The collaboration between FWP, the Big Hole Watershed Committee and other partners to improve the water quality and fisheries of French Creek and its tributaries represents a huge step in the right direction in this area. While substantial healing has occurred over the past 100 years, there are still significant problems that are causing degradation of water quality. Many of these problems can be fixed with proper restoration. Efforts such as those proposed in this application will make great strides in reducing fine sediment loading to French Creek. I would hope that FFIP funds this grant proposal because of the potential improvements to water quality and stream and floodplain function of the area.

Sincerely,

Jim Olsen  
Fisheries Biologist  
Montana Fish Wildlife and Parks



May 24, 2018

Montana Fish, Wildlife & Parks  
Fisheries Division  
PO Box 200701  
Helena, MT 59620-0701

Dear Ms. McGree,

Please accept this letter of support for the Big Hole Watershed Committee's proposal to restore an altered section of French Creek. The Watershed Protection Section (WPS) at the Department of Environmental Quality (DEQ) administers Clean Water Act Section 319 funding to address nonpoint sources of pollution impairing the state's water quality. WPS has an annual call for proposals and review internally and by an inter-agency review panel. In 2017, WPS elected to fund this project on French Creek for \$240,000 based on anticipated funding from the Environmental Protection Agency. Additional funding is necessary for the project to meet its proposed objectives and 319 match requirements.

French Creek is currently water quality impaired by excess fine sediment impacting aquatic life beneficial uses, including macroinvertebrates and native cold-water fish. Streambank erosion is a major source of sediment in French Creek and the TMDL requires a 36% reduction in anthropogenic causes of erosion to meet beneficial uses. This project will go a long way toward meeting target by addressing historical channel alterations that confine French Creek against a large eroding bank contributing tons of sediment annually. This project fits into a broad watershed approach to addressing sediment impairments from the headwaters downstream – including recent projects in California Creek, Moose Creek, and further upstream in French Creek. The Watershed Restoration Plan for the Middle-Lower Big Hole identifies French Creek as a priority for stream restoration. WPS encourages funding this proposal to improve water quality, promote natural stream functions, and restore a native fishery to this watershed.

Sincerely,

A handwritten signature in blue ink that reads "Dean Yashan".

Dean Yashan, Section Supervisor  
MDEQ, Watershed Protection Section  
1520 E 6th Ave  
Helena, MT 59601  
Email: [dyashan@mt.gov](mailto:dyashan@mt.gov)  
(406) 444-5317

Phil Ralston  
Ralston Ranch  
54289 MT Hwy 43  
Wise River, MT 59762  
September 14, 2017

Montana Department of Environmental Quality  
PO Box 200901  
Helena, MT 59620

Dear Montana DEQ,

I would like to communicate my support for the Big Hole Watershed committee's project to restore French Creek through the 319 application process.

Ralston Ranch is my family's cattle ranch and it is the only operating ranch in the Deep Creek drainage. My family began ranching here in 1886. The ranch property is located at the lower end of Deep Creek, and on the Big Hole River near Deep Creek which includes two miles of Deep Creek frontage and 4 miles of Big Hole River frontage. Ralston Ranch borders both Mt. Haggin Wildlife Management Area, and US Forest Service. I have a grazing lease for cattle on the Mt. Haggin Wildlife Management Area.

I have been a board member and supporter of the Big Hole Watershed Committee since its inception in 1995. Ralston Ranch is enrolled in the Candidate Conservation Agreement with Assurances (CCAA) program for restoration of arctic grayling. I welcomed the first restoration project completed under the CCAA program in 1998.

The entire upper drainage affected by the Anaconda Smelter fallout have long been a problem and its repair is of interest to me. The sediment wash from California Creek that enters the stream is very fine. In a heavy rain event white sediment from California Creek uplands enters the stream and washes down through Deep Creek and enters the Big Hole River. This sediment stays suspended in the river for miles. When placer mining was active in the entire drainage, similar white sediment washed downstream turning the water white. French Creek gulch and First Chance gulch were part of this placer mining, seasonally until the mid 1950's.

The Big Hole Watershed Committee has tried to bring attention to the significant impairments on Mt. Haggin since 2000. Working with Montana Fish, Wildlife and Parks and others to repair California Creek and the hillsides, French Gulch and Moose Creek have already made noticeable improvements to the land and water. I have seen a significant improvement in the water quality in lower Deep Creek in the last twenty years, and in the last couple of years there has been no evidence of the white, chalky water flowing by the ranch.

I urge Montana DEQ to support the Big Hole Watershed Committee's request to support the French Creek's repair. Its location at the headwaters of the Deep Creek drainage makes this a critical piece to watershed health and quality.

Sincerely,

A handwritten signature in black ink, appearing to read "Phil Ralston", with a stylized flourish at the end.

Phil Ralston

ANACONDA-DEER LODGE COUNTY  
PLANNING DEPARTMENT

800 South Main  
Anaconda, Montana 59711  
Phone No. (406) 563-4010  
Fax No. (406) 563-4076



September 18, 2017

Montana Department of Environmental Quality  
*Non-Point Source 319 Funding*  
PO Box 200901  
Helena, Montana 59620

Dear Montana DEQ,

Anaconda-Deer Lodge County (ADLC) would like to pledge its support for stream restoration work on French Creek in the Mount Haggin Wildlife Management Area. We support the partnership and efforts of Montana Fish, Wildlife and Parks and the Big Hole Watershed Committee to complete this work. We strongly encourage the non-point source 319 program to fund the proposed work.

The French Creek portion of work will build upon successful restoration upstream in French Gulch, Moose Creek, and California Creek all of which now have rebuilt natural streams, connected floodplains, increased natural water storage, reduced sediment loads, and improved fish and wildlife habitat. The proposed French Creek work will continue to support a transformation on the state owned land from historic damage of Anaconda Company Smelter operations to a thriving ecosystem.

ADLC has had an opportunity to review the work recently completed in the French Gulch-Moose Creek drainages. We are very impressed by the results and encouraged that restoration of these watersheds can be accomplished as rapidly and cost-effectively as already demonstrated. 319 funding is a key factor in this success and we encourage continued support of these restoration efforts by MDEQ through this grant program.

As you may be aware, USEPA Region 8 is proposing a waiver/relaxation of state water quality standards for a number of high elevation watersheds in the County due to the "technical infeasibility" of implementing effective best management practices in these mountainous areas. The success of work performed in the French Gulch and Moose Creek drainages by the Big Hole Watershed Committee and its partners clearly demonstrates otherwise. Again, we strongly support continued funding of these restoration activities.

Respectfully,

Chas Ariss, PE  
Public Works-Planning Director-County Engineer  
Anaconda-Deer Lodge County



George Grant TU  
PO Box 563  
Butte, MT 59703

*Cold Clean Fishable Water*

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Montana Department of Environmental Quality  
*Non-Point Source 319 Funding*  
PO Box 200901  
Helena, Montana 59620

Dear Montana DEQ,

The George Grant Chapter of Trout Unlimited (GGTU) would like to pledge our support for stream restoration work on French Creek on the Mount Haggin Wildlife Management Area. We support the partnership and efforts of Montana Fish, Wildlife and Parks and the Big Hole Watershed Committee to complete this work and we encourage the non-point source 319 program to fund the proposed work.

The French Creek portion of work will build upon successful restoration upstream in French Gulch, Moose Creek, and California Creek all of which have rebuilt natural streams, connected floodplains, increased natural water storage, reduced sediment loads, and improved fish and wildlife habitat. The proposed French Creek work will continue to support a transformation on the state owned land from historic damage to a thriving ecosystem.

Projects like this and specifically this project fits perfectly with our mission statement to: Conserve, Protect and Restore cold water fisheries and their watersheds in southwest Montana. In fact, GGTU has been supporting this work with funding and volunteer hours to remediate and restore the drainage. Not only does it benefit the fisheries resource it also provides jobs in our area. There's no reason to continue to pollute the Big Hole River. It's not going to get better without help. Now is the time to fund and complete the project. ***Cold, Clean, Fishable Water*** benefits everyone in the Big Hole Valley.

Thank you.

Roy Morris  
Past President  
George Grant TU  
PO Box 563  
Butte, MT 59703  
president@ggtu.org  
406-491-4255

September 14, 2017

Montana Department of Environmental Quality  
*Non-Point Source 319 Funding*  
PO Box 200901  
Helena, Montana 59620

Dear Montana DEQ,

As a local fly fisherman living close to French Creek I support the restoration work being done on French Creek in the Mount Haggin Wildlife Management Area. I bought property in 1982 and built our home in 1990 a mile from French Creek and I fish the creek as often as I can. Over the years I have seen a big improvement in the fishery since restoration work has been done in the French Creek drainage on the Wildlife Management Area.

I support the partnership and efforts of Montana Fish, Wildlife and Parks and the Big Hole Watershed Committee to continue their restoration work on this valuable fishery. I hope the non-point source 319 program will fund the proposed work. I have seen the clay banks eroding, discoloring the stream and having an impact on the fishery.

Other work already completed in French Gulch, the California uplands and California Creek have rebuilt natural stream channels and greatly reduced sediment loads in the creek. All this previous work has improved fish and wildlife habitat. I have noticed the fish are in better condition and larger than they have been prior to the restoration work that has been completed.

I would hope funding will be provided to continue restoration work on this fishery. I have seen an increase in the number of grayling being caught since sediment loads have been greatly reduce after completion of past restoration work. I've also noticed the health and condition of westslope cutthroat, brooktrout and rainbow trout has also improved.

Approval of funding under the non-point source 319 program will help in continuing the restoration work in French Creek.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Olson", with a stylized flourish at the end.

Paul Olson  
524 Wolf Ridge Road  
Wise River, MT 59762

Sunrise Fly Shop  
472 Main St  
Melrose, MT 59743  
sunriseflyshop.com

Montana Department of Environmental Quality  
*Non-Point Source 319 Funding*  
PO Box 200901  
Helena, Montana 59620

Dear Montana DEQ,

I would like to pledge my support for stream restoration work on French Creek on the Mount Haggin Wildlife Management Area. I support the partnership and efforts of Montana Fish, Wildlife and Parks and the Big Hole Watershed Committee to complete this work. I encourage the non-point source 319 program to fund the proposed work.

The French Creek portion of work will build upon successful restoration upstream in French Gulch, Moose Creek, and California Creek all of which have rebuilt natural streams, connected floodplains, increased natural water storage, reduced sediment loads, and improved fish and wildlife habitat. The proposed French Creek work will continue to support a transformation on the state owned land from historic damage to a thriving ecosystem.

Montana's fishing industry brings millions of dollars to State's economy every year. The success of the fishing and outfitting industries are dependent on healthy fish and naturally reproducing fish populations. Without clean water and thriving riparian habitats, healthy populations of fish cannot exist. The restoration work on French Creek will help to improve the overall water quality of the Big Hole River, which will insure future generations of healthy fish.

The Big Hole River is the lifeblood of all Big Hole Valley communities. Improving the overall health of the Big Hole Watershed directly benefits all the Big Hole River's rural communities.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eric Thorson', with a long horizontal flourish extending to the right.

Eric Thorson  
Co-Owner of Sunrise Fly Shop

**A SUPPLEMENTAL REPORT**

**For the**

**PROPOSED FRENCH GULCH STREAMBED REHABILITATION PROJECT**

**On the**

**MOUNT HAGGIN WILDLIFE MANAGEMENT AREA**

**DEER LODGE COUNTY, MONTANA**

Prepared for:

Big Hole Watershed Committee

And

Montana Department of Fish, Wildlife and Parks

P. O. Box 200701

Helena, Montana 59620-0701

By

David Ferguson  
GCM Services, Inc.  
Butte, Mt 59701

May 13, 2016

## INTRODUCTION

The Big Hole Watershed Committee and Montana Department of Fish, Wildlife and Parks (FWP), Butte, Montana contracted with GCM Services, of Butte, Montana to supply additional, supplemental historic information on linear gravel pile features within the area of a proposed streambed rehabilitation project on French Gulch in Deer Lodge County. The purpose of the project is to restore the creek channel and create trout habitat. French Gulch is a tributary of the Big Hole River.

The subject of the research is a pair of linear gravel piles along the French Creek floodplain in Sections 1 and 2, T2N R12W. The linear gravel piles more or less parallel the recently replaced roadbed and the drainage channel. There has been extensive, well-documented placer mining activity, including dredging operations, on French Creek above this point. The features lie in the drainage bottom, an extensive riparian environment with rushes, willows and dogwood growing amid the flowing French Creek Channel, bogs, and beaver impoundments.

Figure 1 shows the location of historic selected cultural properties on the Deer Lodge National Forest 1:126,720-scale Forest Visitor Map and the USGS 7.5-minute topographic quadrangle, *Lincoln Gulch*, Montana (1962). Figure 2 is an aerial view of the area of investigation showing the linear dike features provided by Montana FWP. Figure 3 is an enlargement of a portion of the 1907 Plat of the Allen Gold Company's placer claims on French Creek. Figure 4 is a portion of the 1872 Master Title Plat for Township 2 North, Range 12 West showing the subject area. Figures 4-6 are photos of the linear gravel piles along the French Creek floodplain taken in 2014 and 2016.

The following sources were examined in an effort to identify the origin of the two linear structures: The Bureau of Land Management (BLM) mineral survey plat files in the Butte Field Office; the BLM's General Land Office survey plat archives, found on the internet at: (<https://www.glorerecords.blm.gov/default.aspx>); the William R. Allen Papers at the Montana Historical Society Archives; Montana Bureau of Mines and Geology vertical files, the library of Montana Tech, W.R. Allen's 1949 autobiography, *The Chequemegon*, as well as general mining references such as mining industry journals, state records of mine production and overviews of Montana mining camps, and, past reports by Newell (1980) and Ferguson (2008; 2013) on the local history of the French Creek area.

[FULL REPORT AVAILABLE ELECTRONICALLY]